**FIG. 1A**

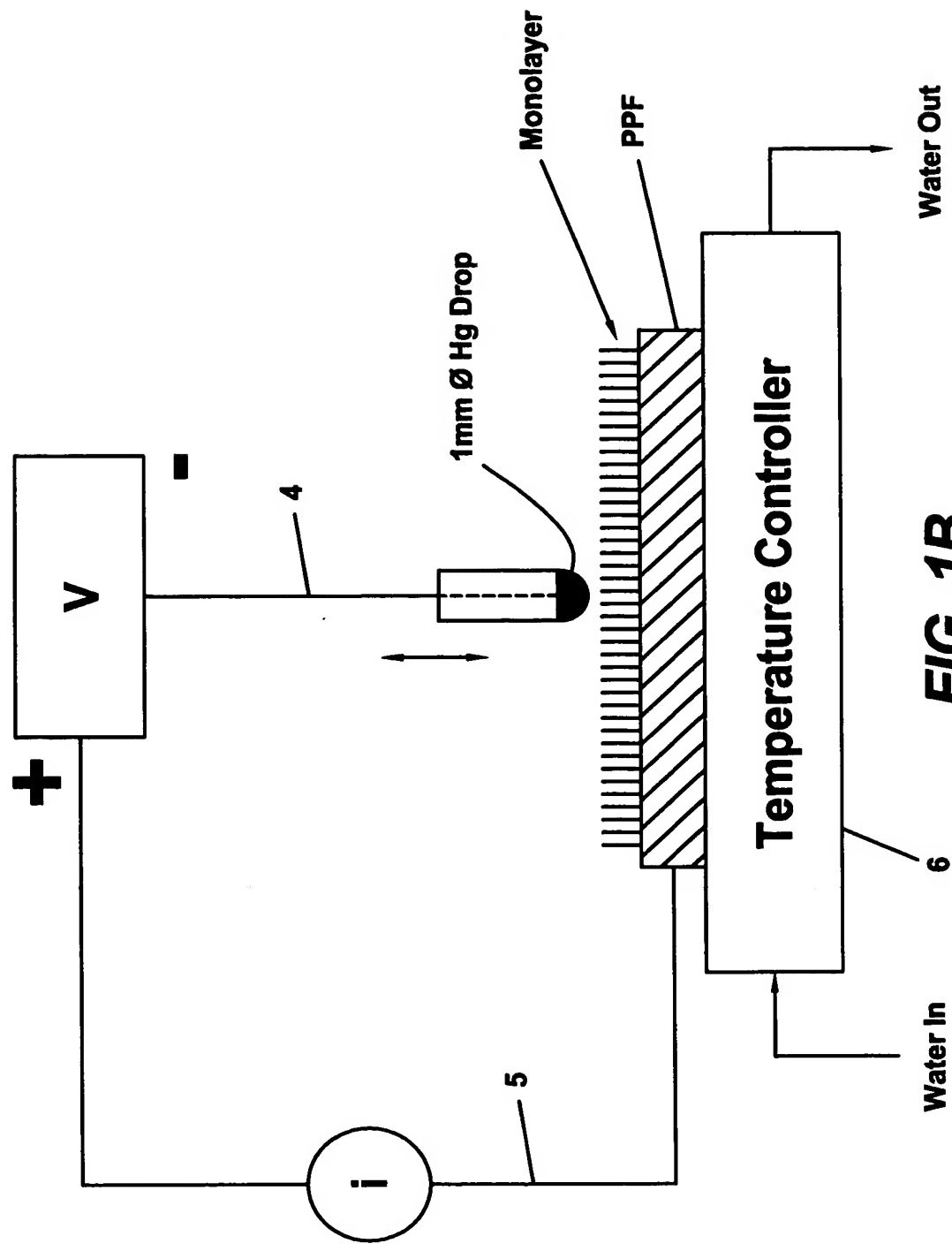


FIG. 1B

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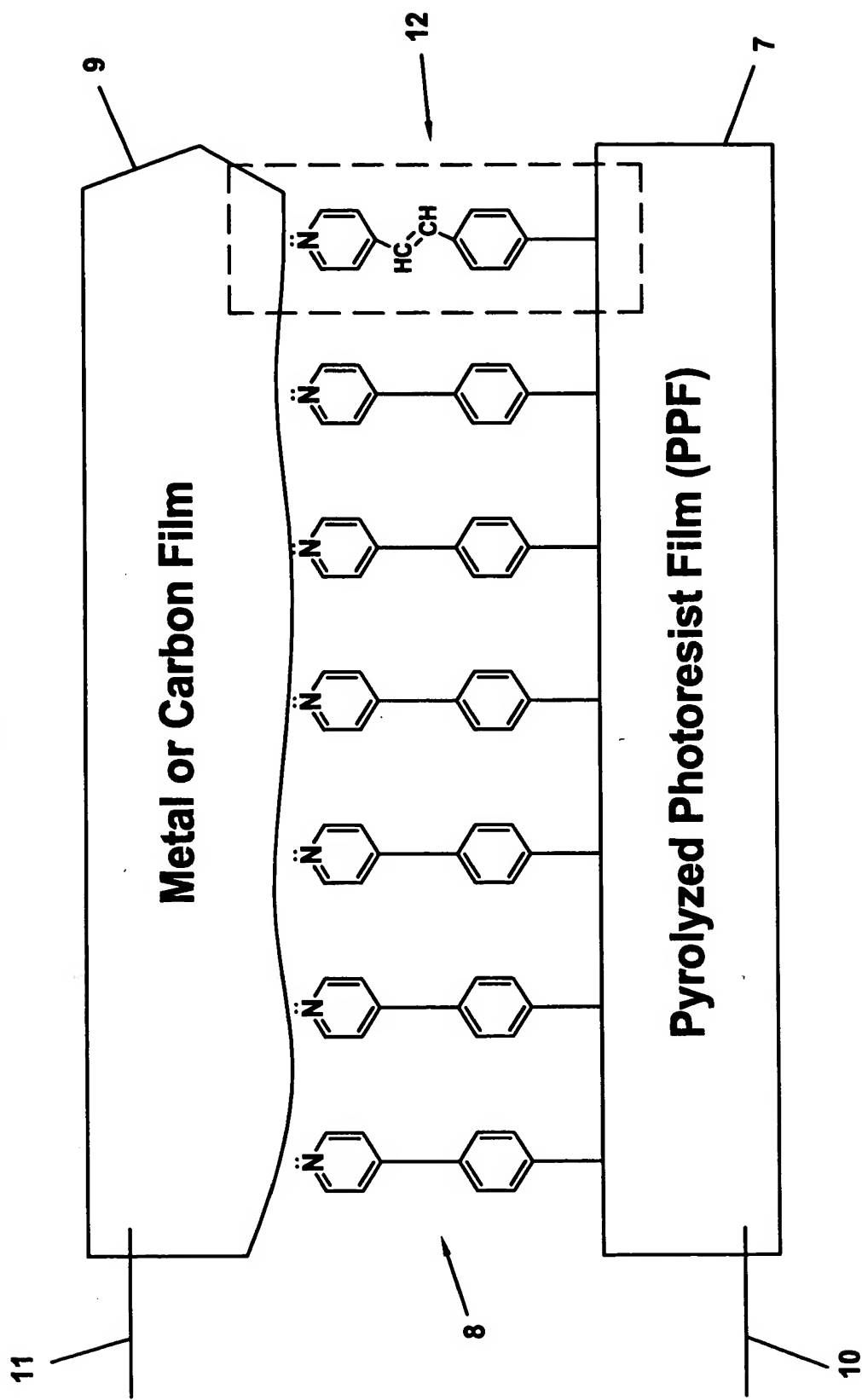


FIG. 2

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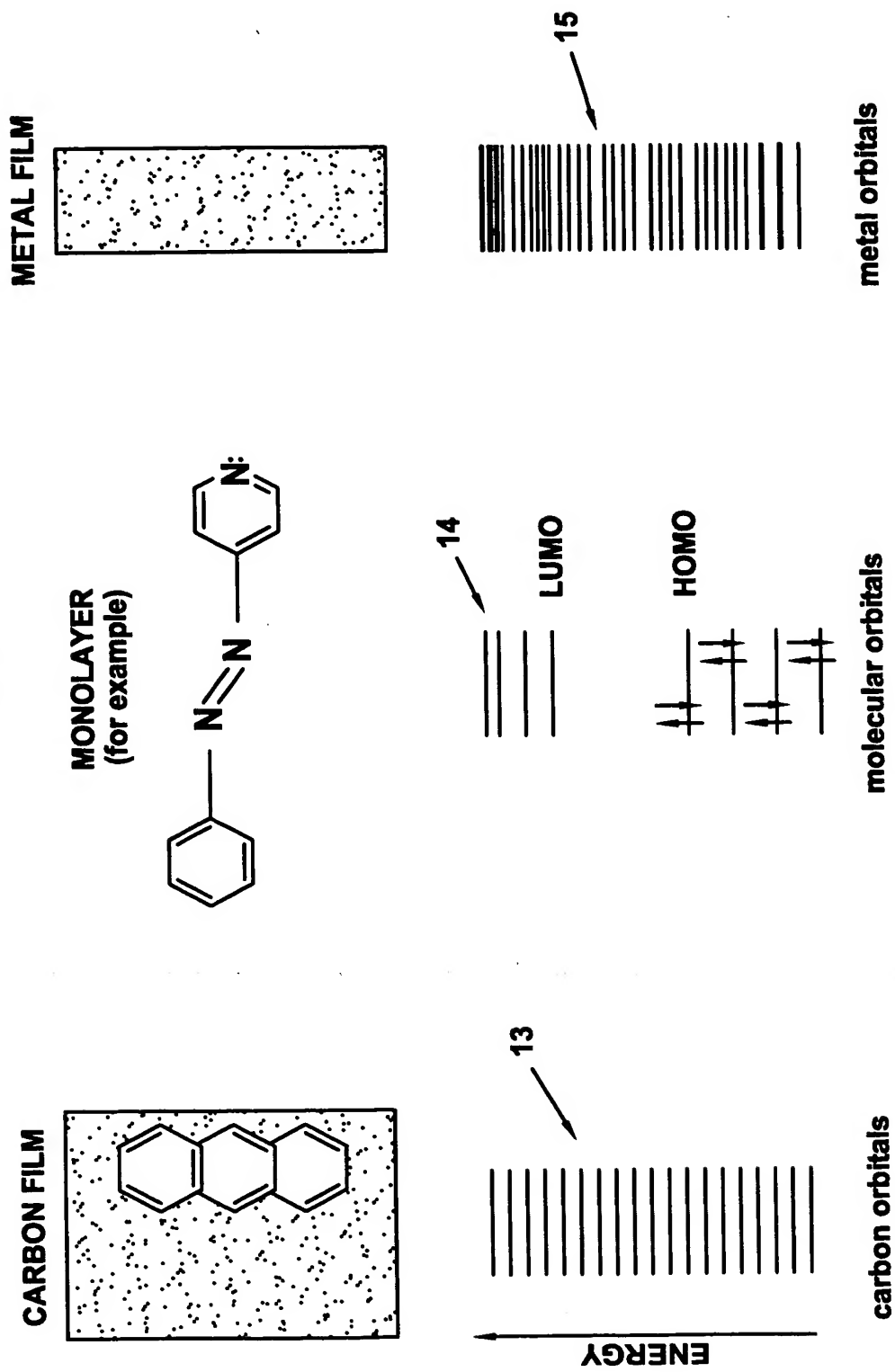
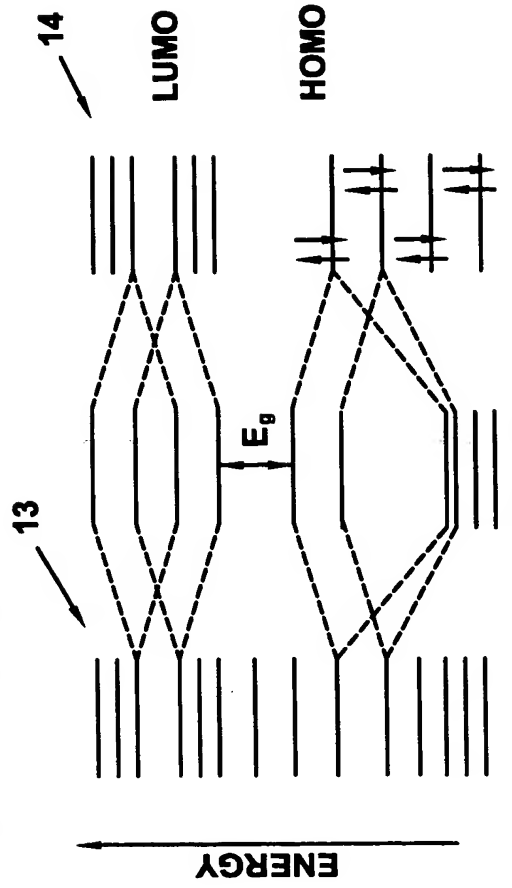
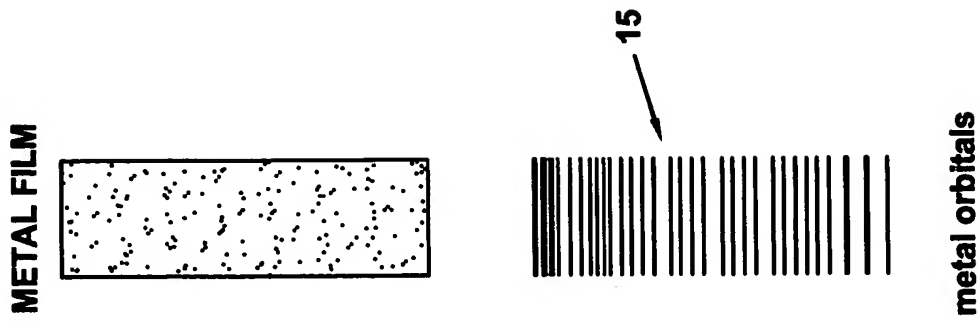
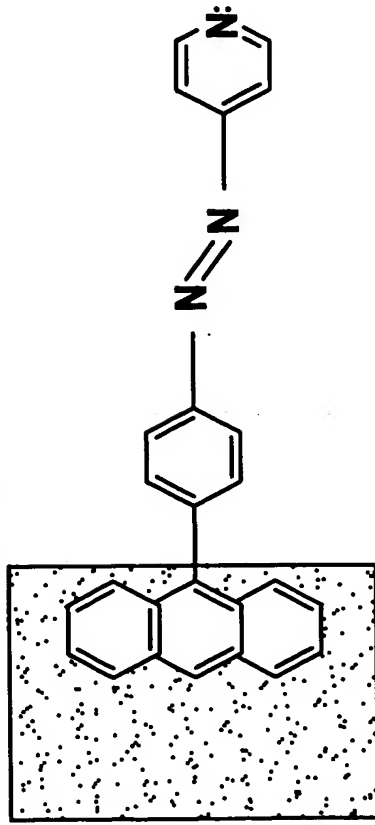


FIG. 3

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Chemically bonded organic monolayer on PPF



carbon orbitals mix with monolayer orbitals

FIG. 4

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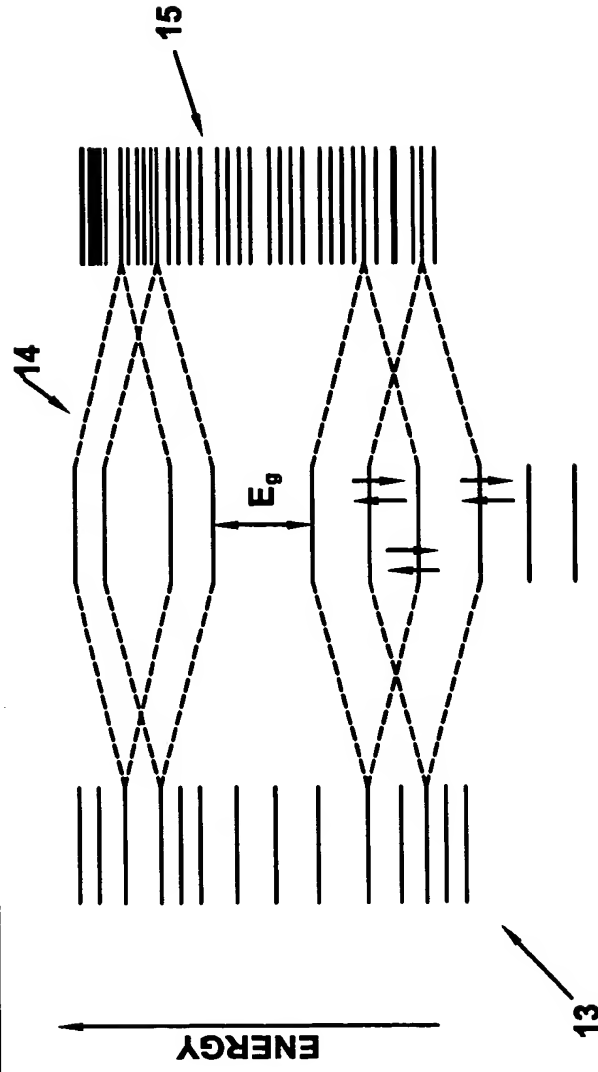
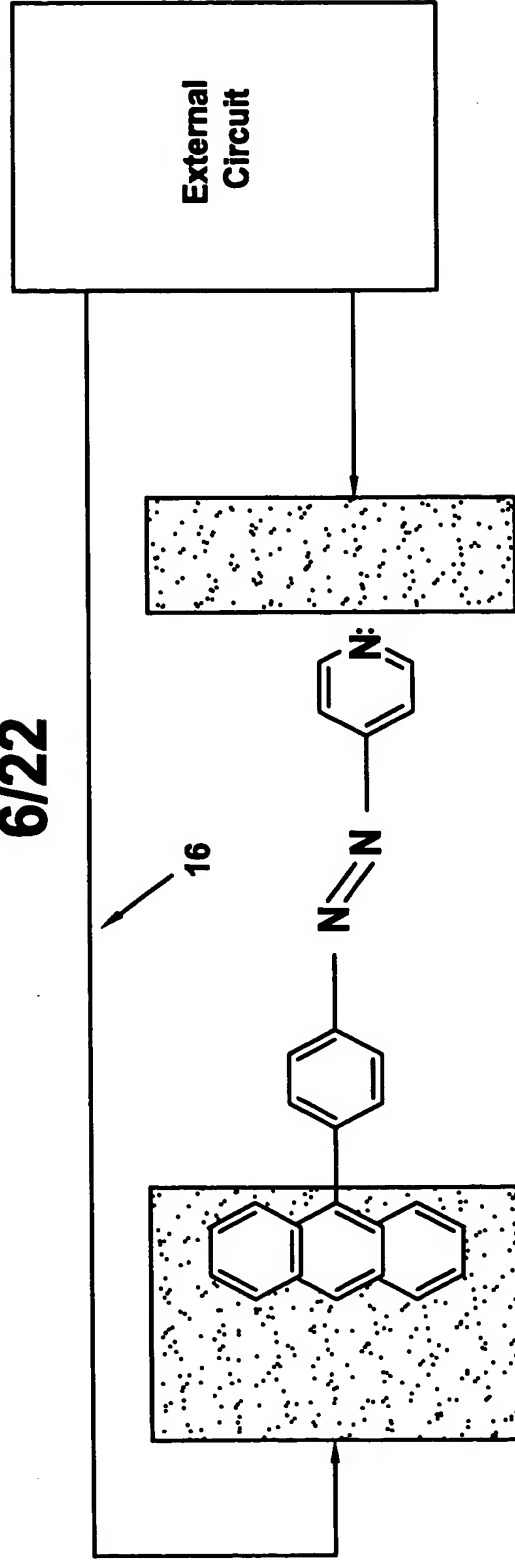


FIG. 5

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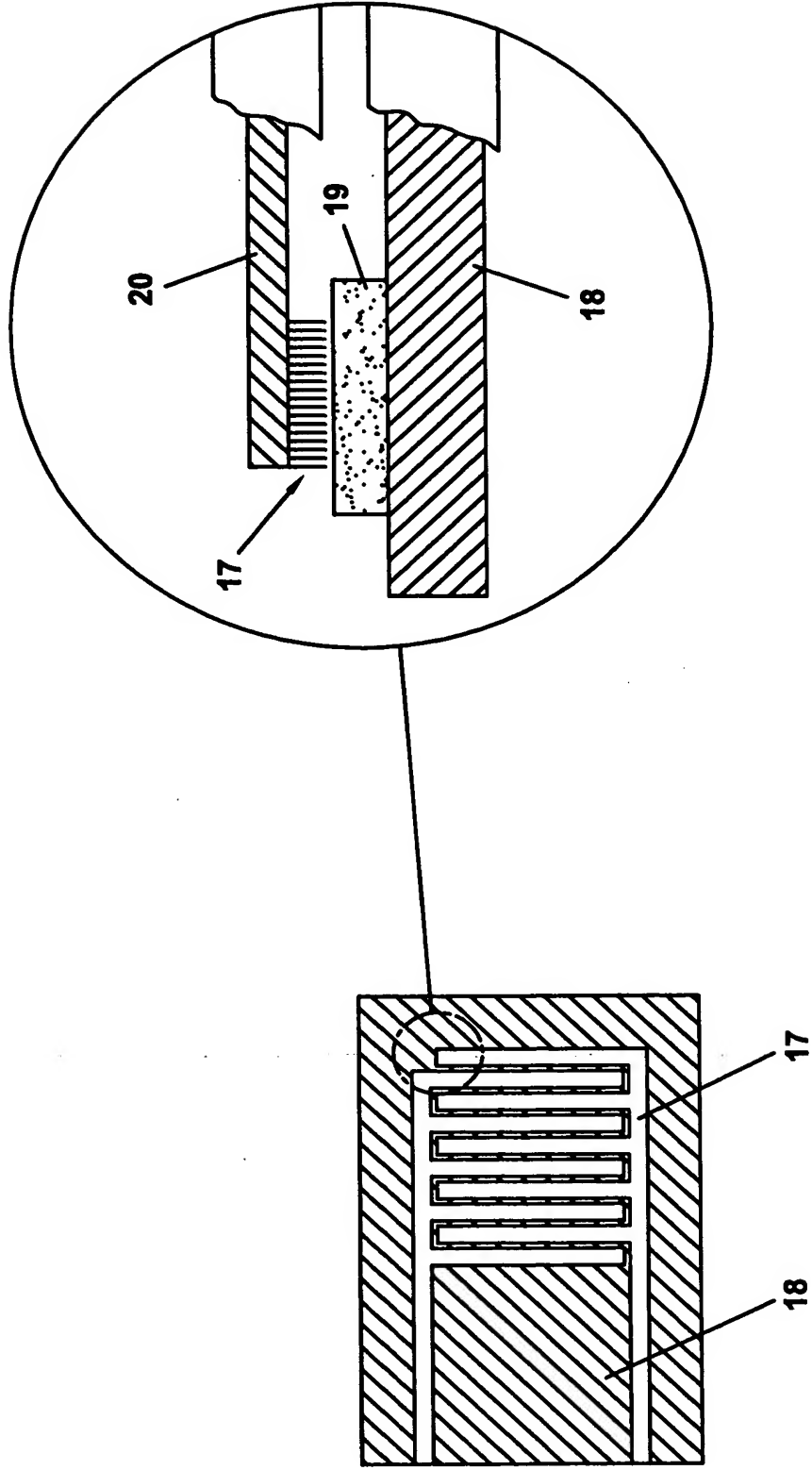


FIG. 6

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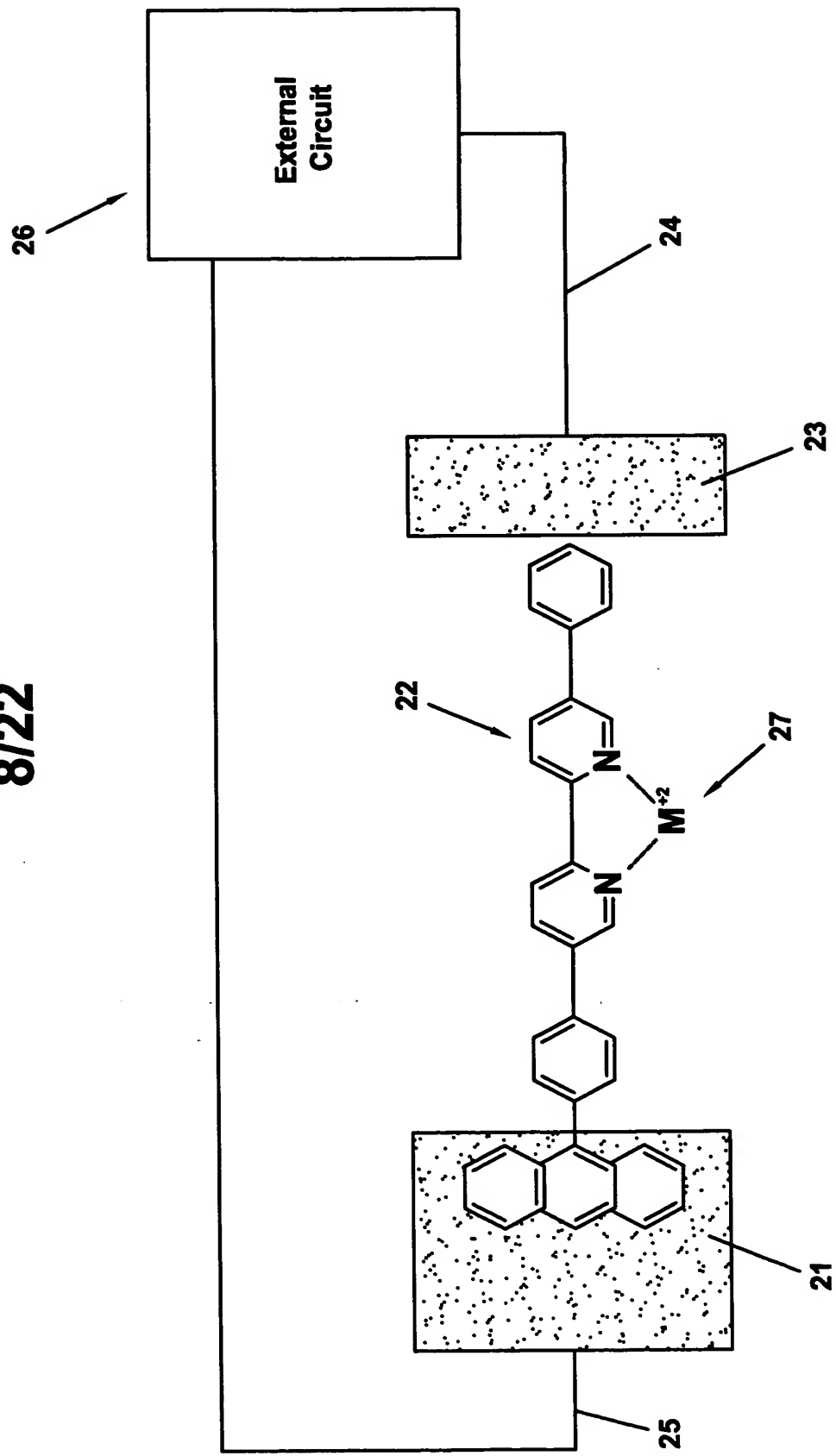


FIG. 7

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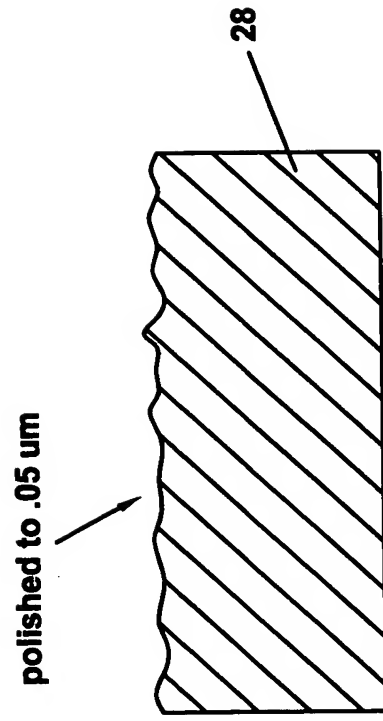
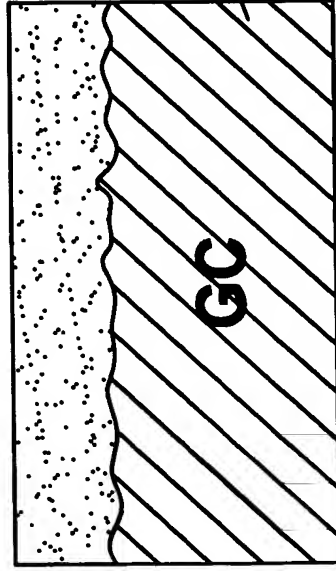


FIG. 8

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29



1000°, H₂/N₂ atmosphere

30

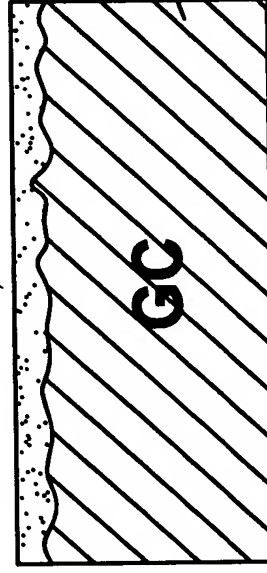


FIG. 9

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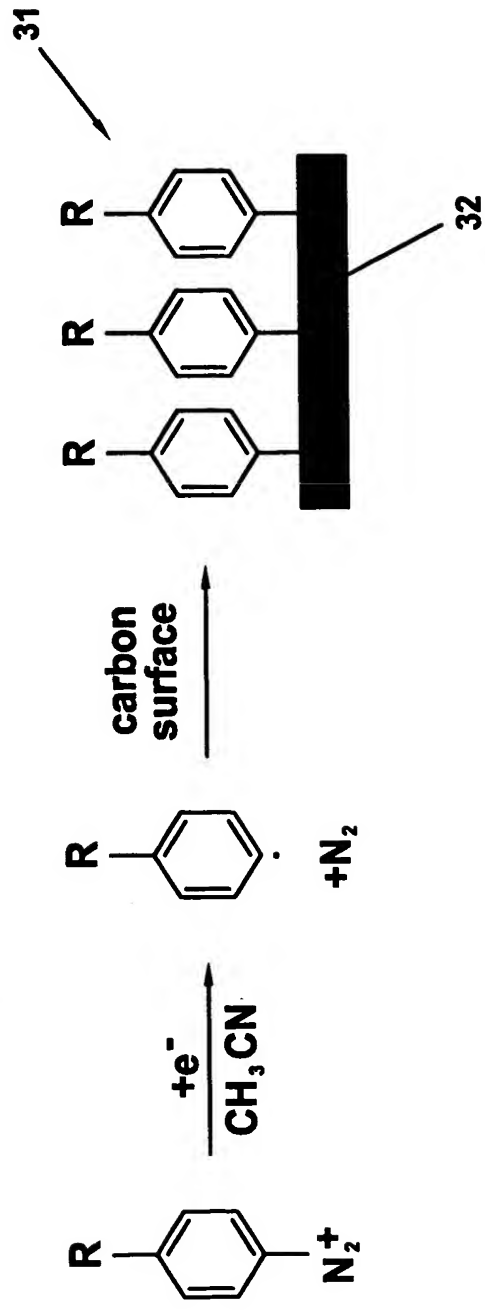


FIG. 10

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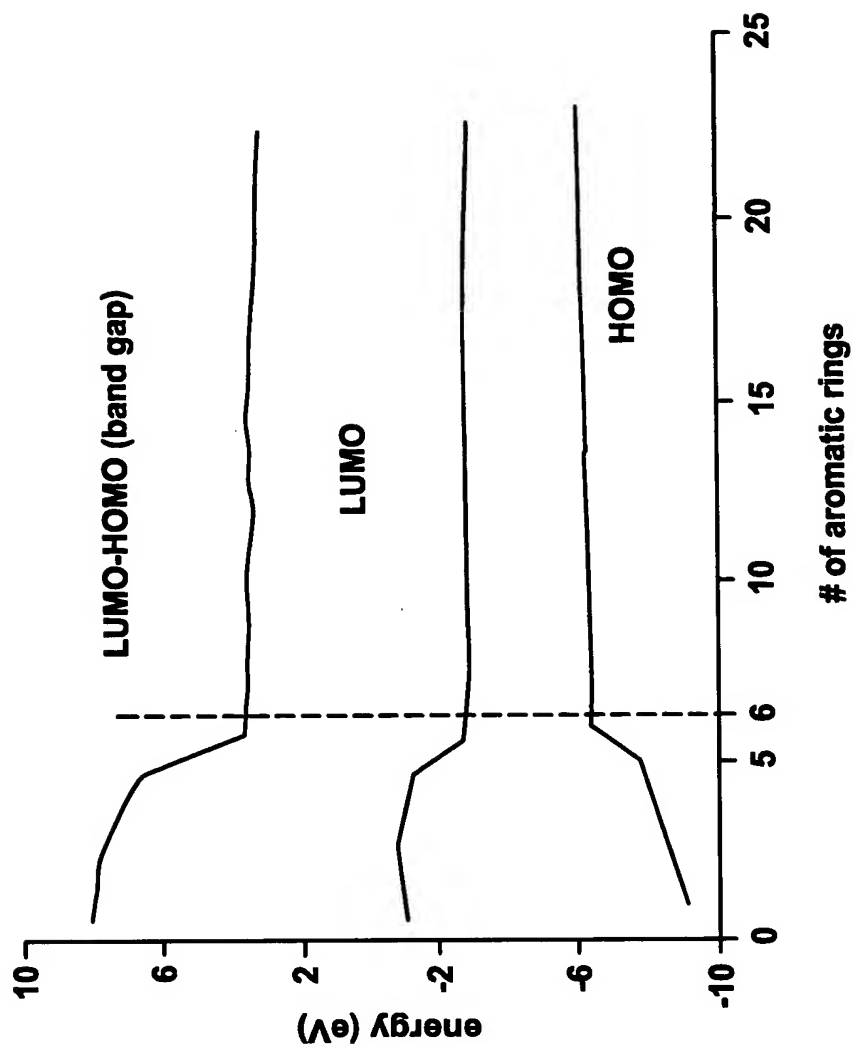
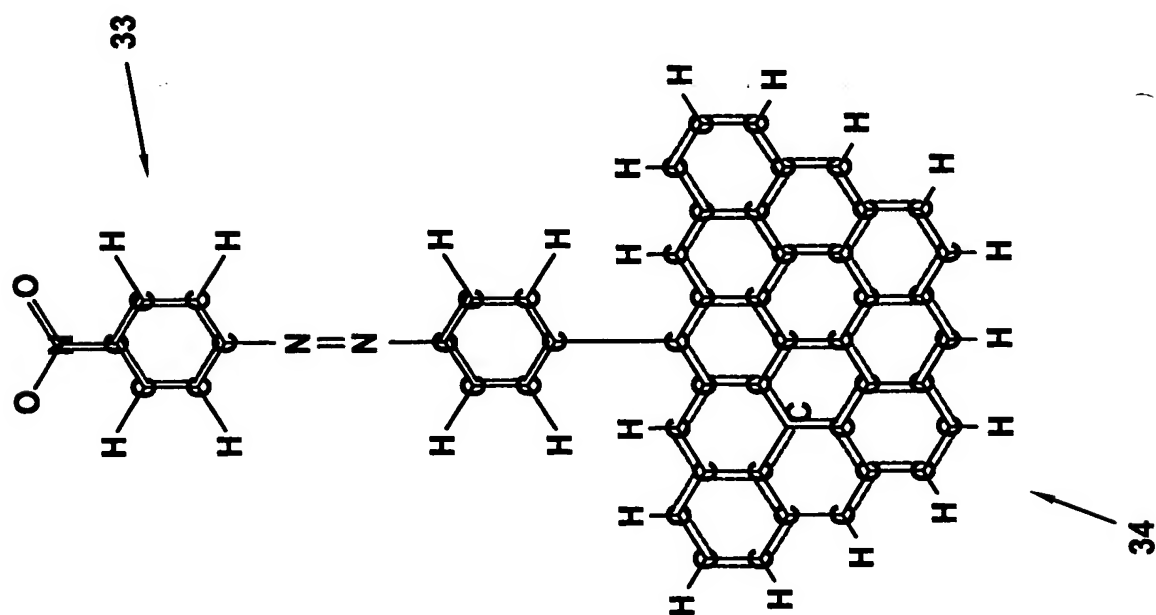


FIG. 11

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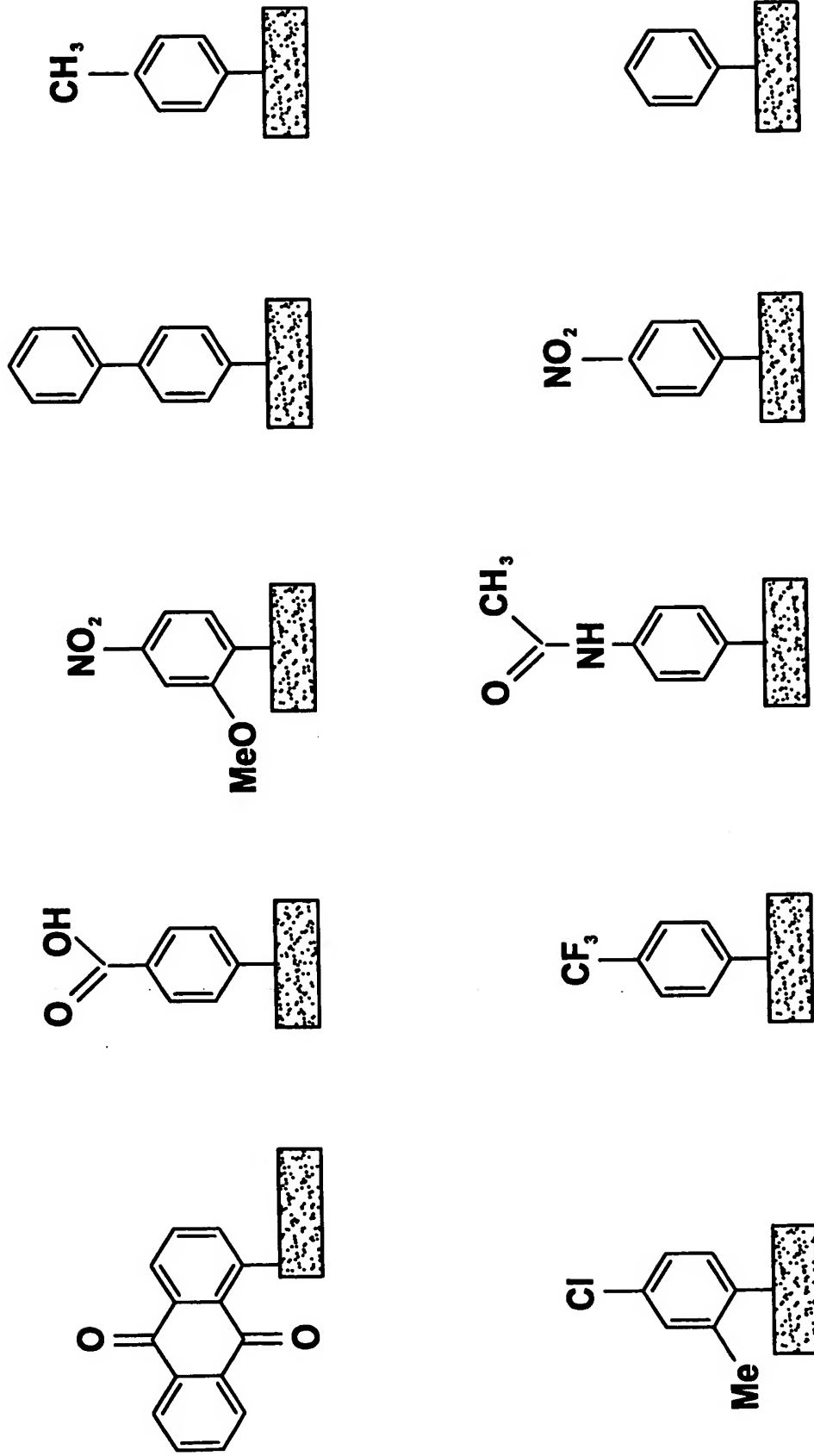


FIG. 12

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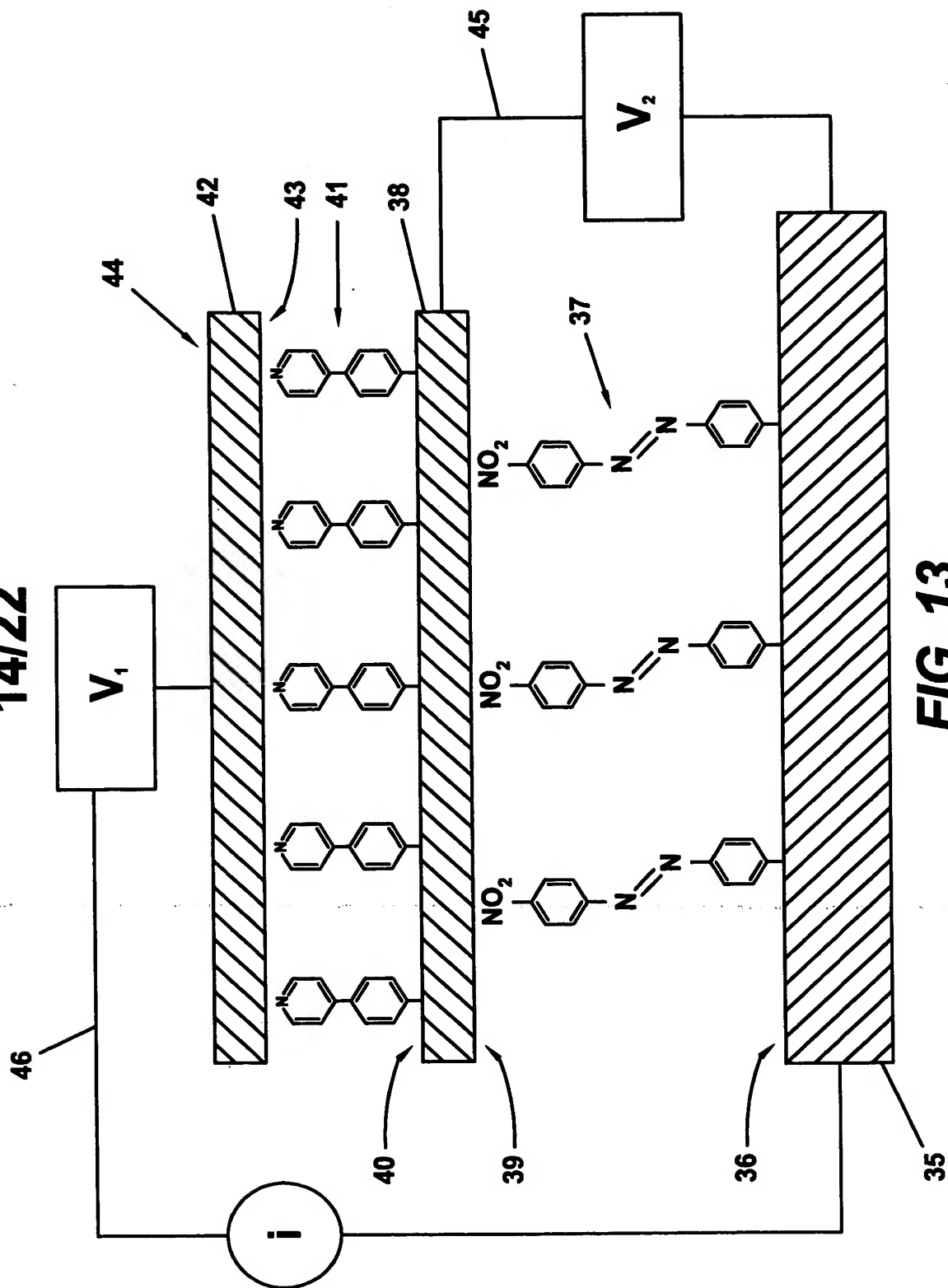
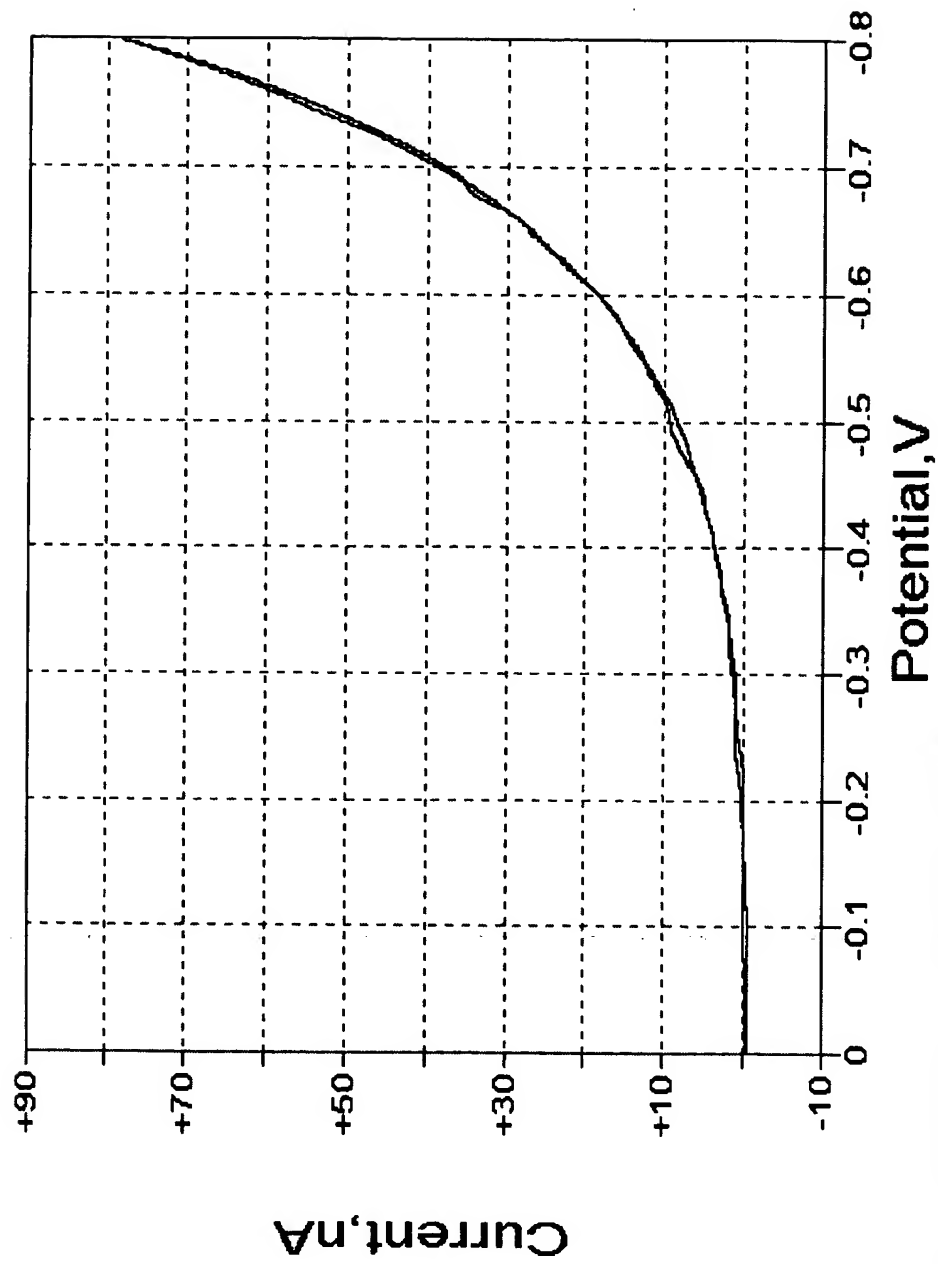


FIG. 13

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E = -330.0mV i = +5.455e-008A

FIG.14

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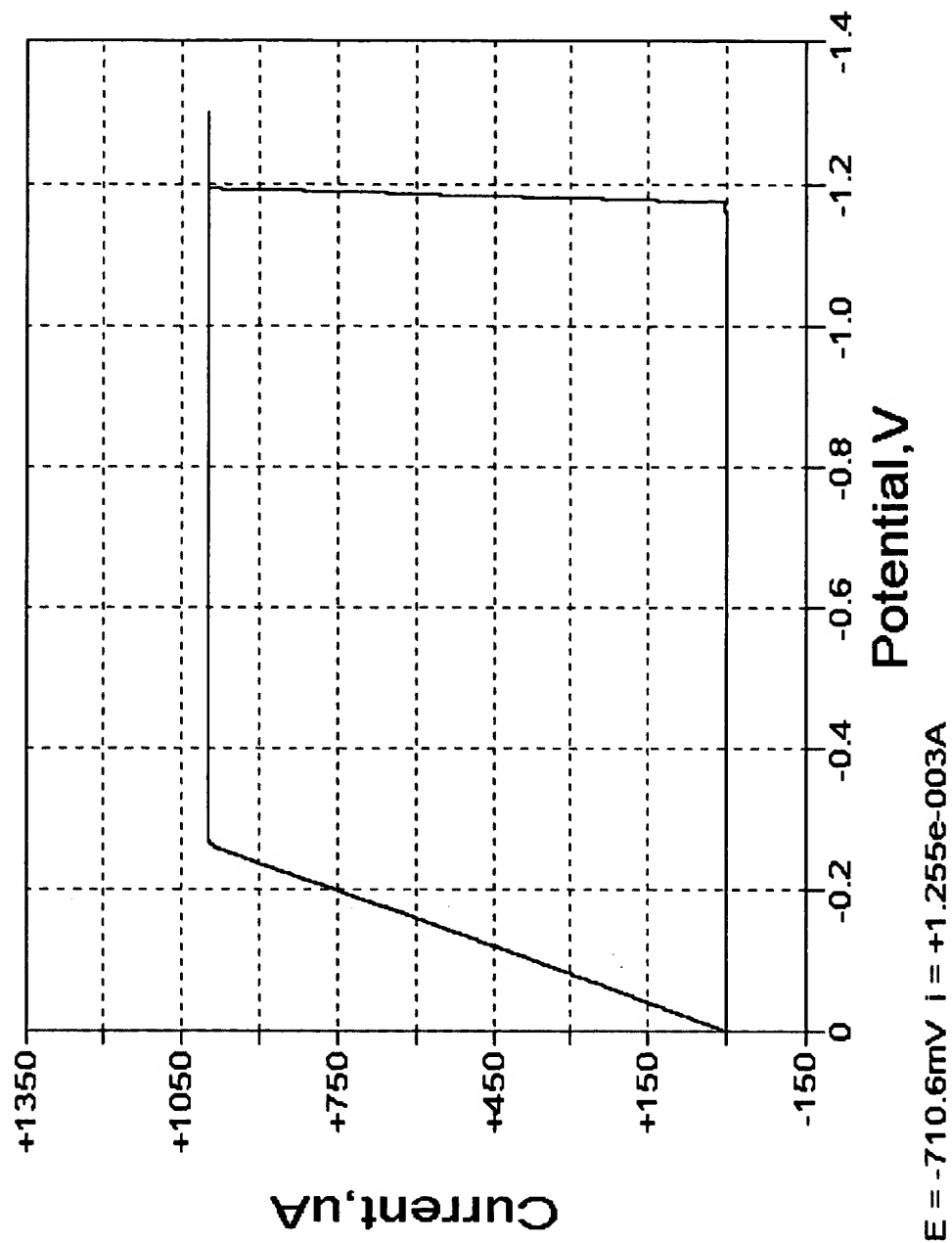


FIG.15

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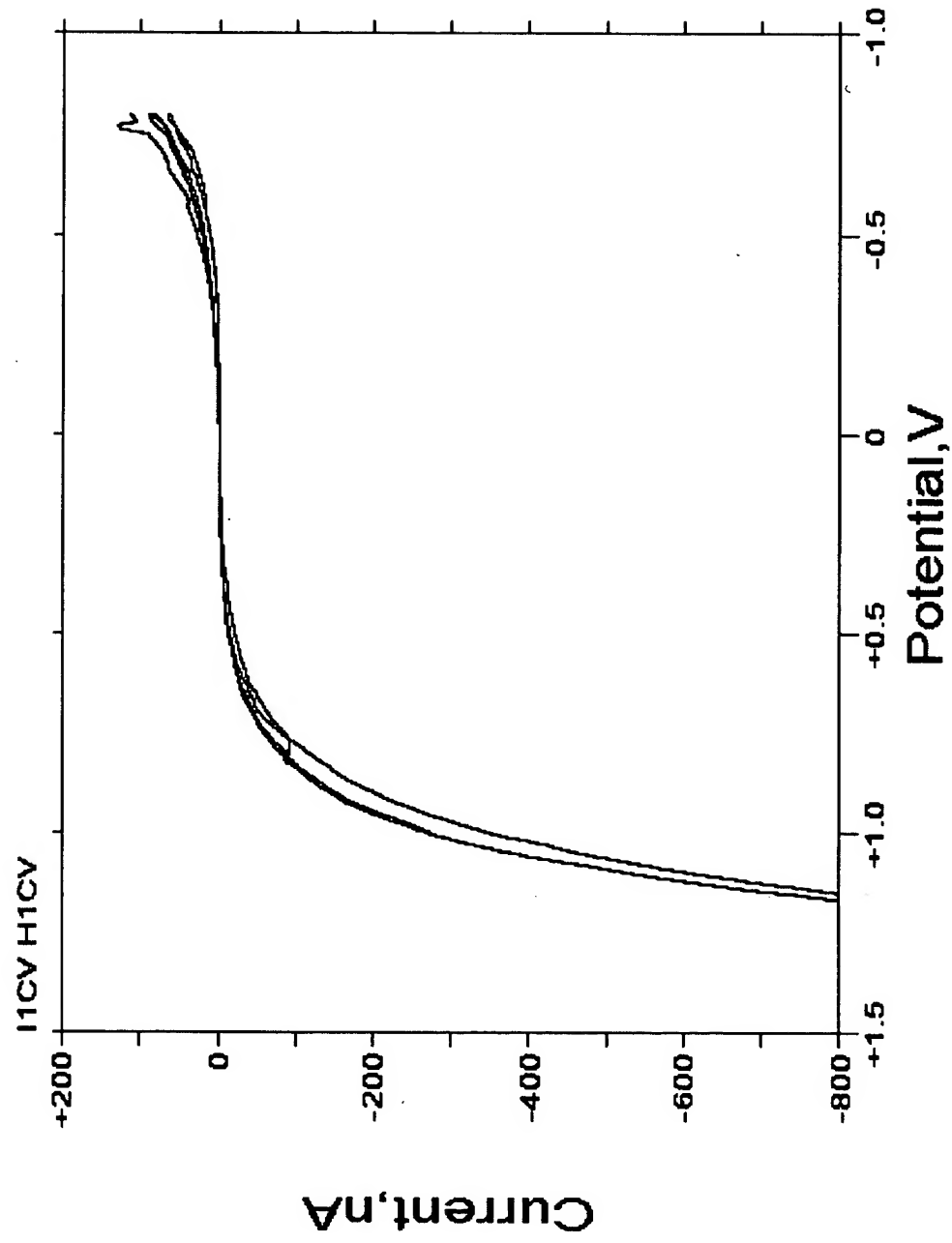


FIG.16

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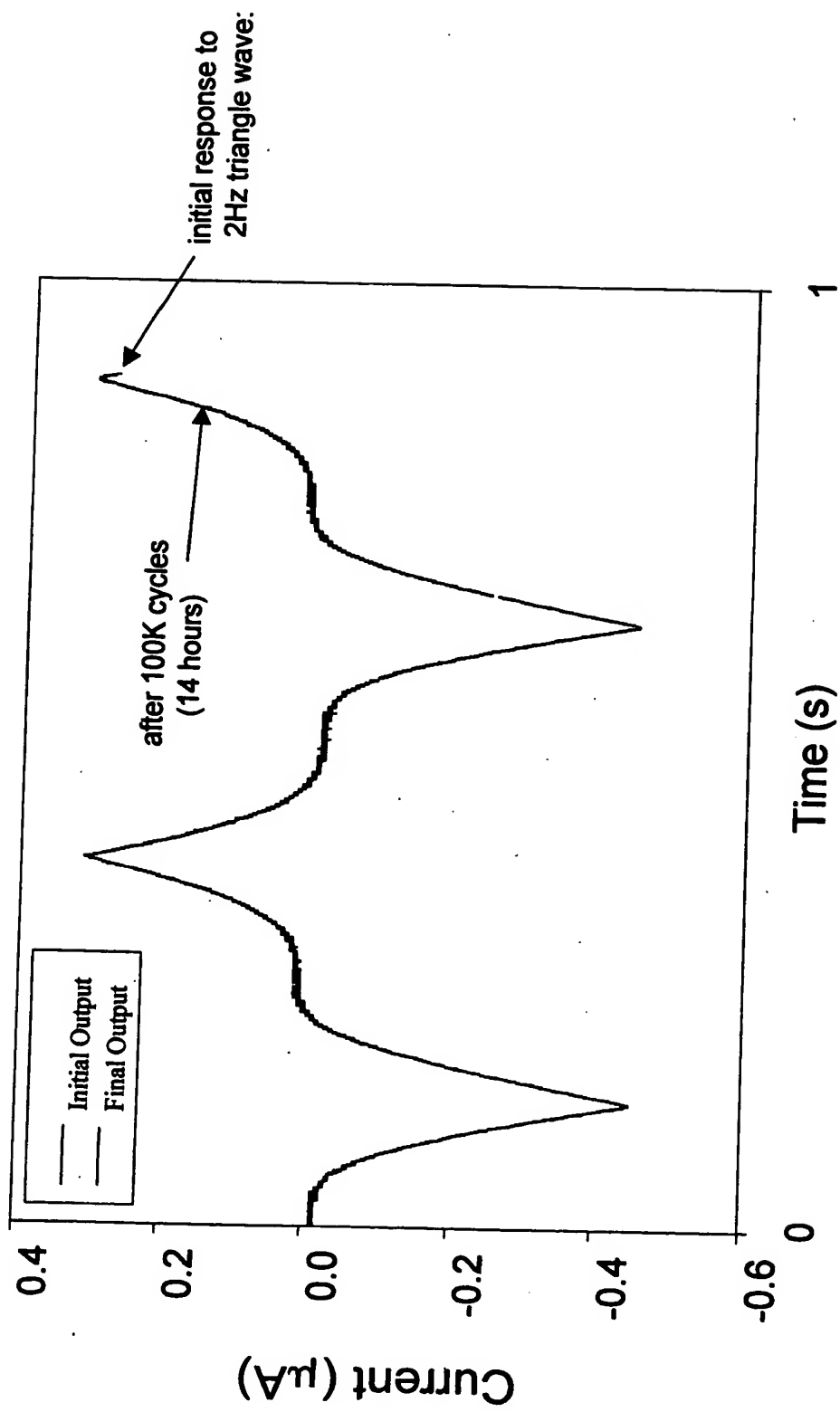


FIG.17

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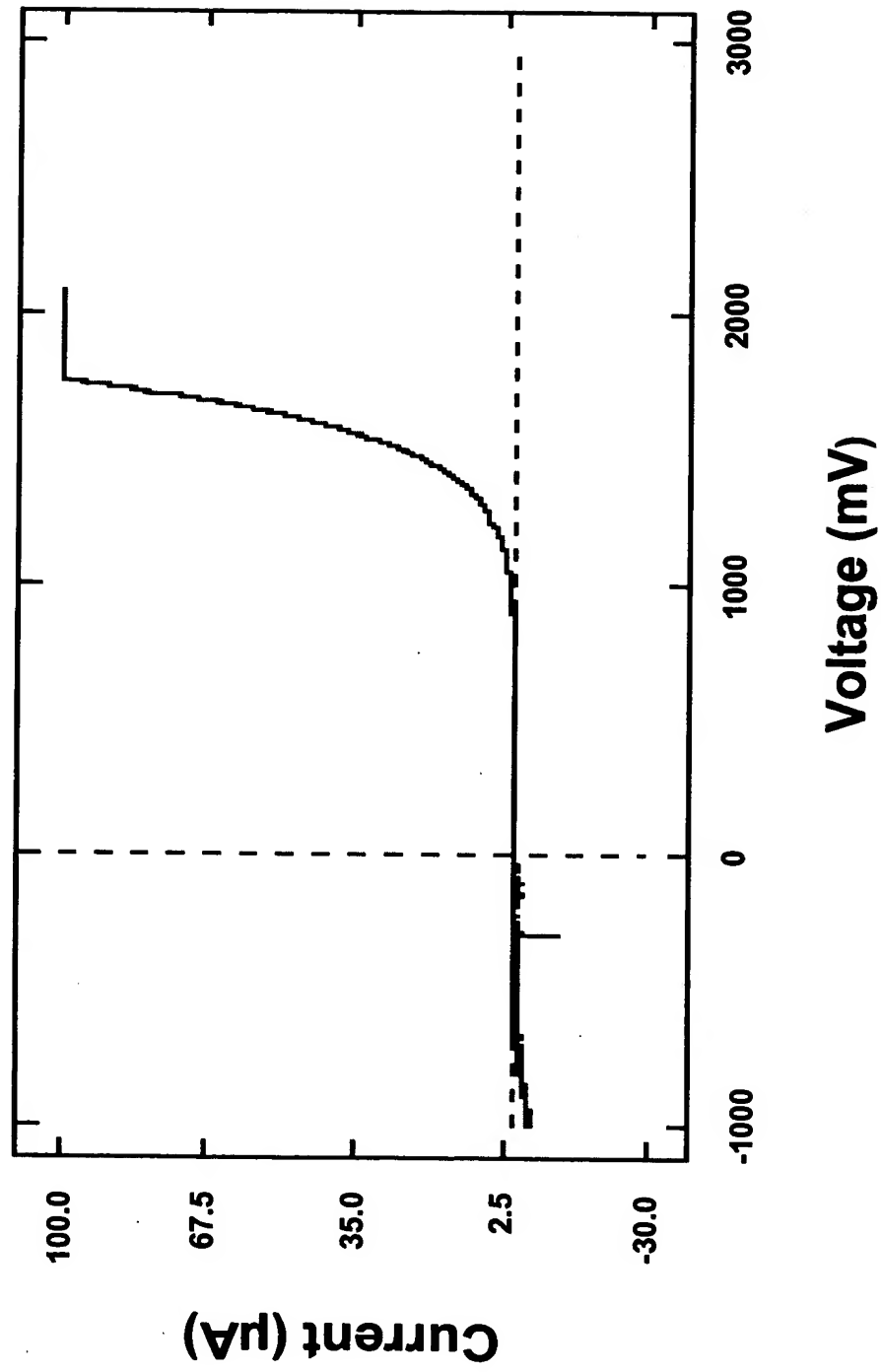


FIG.18

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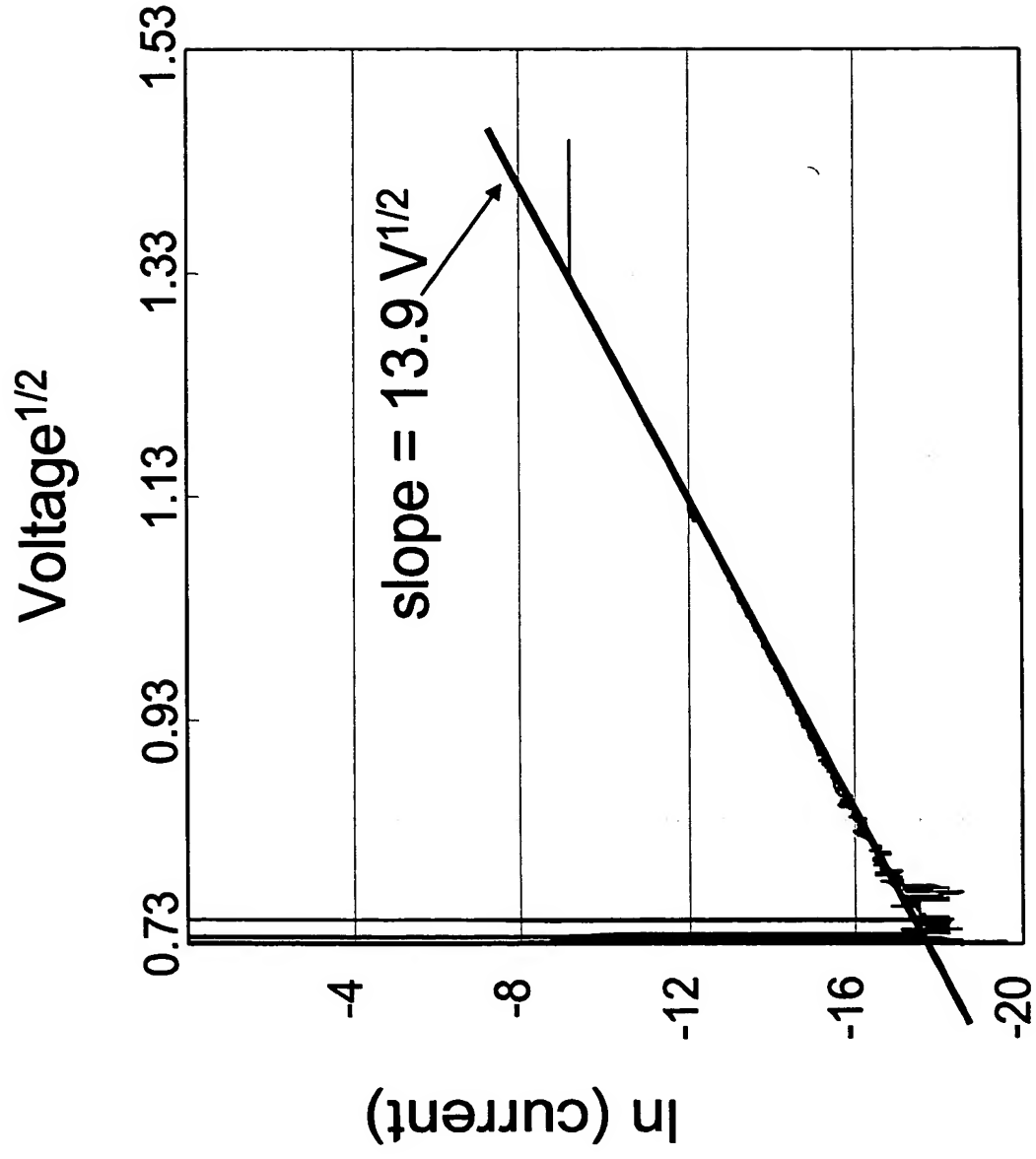


FIG.19

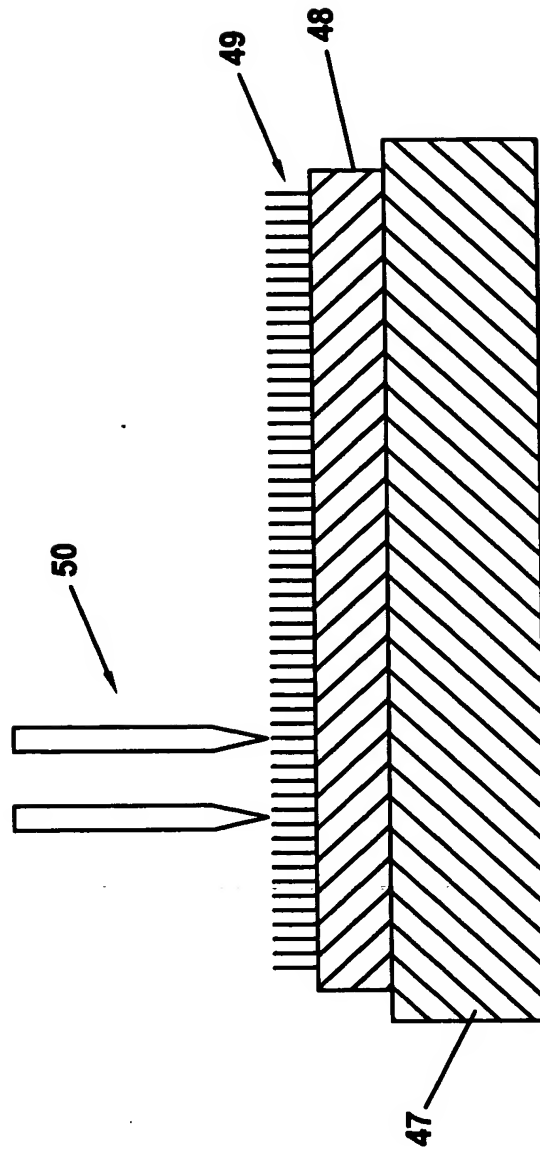


FIG. 20

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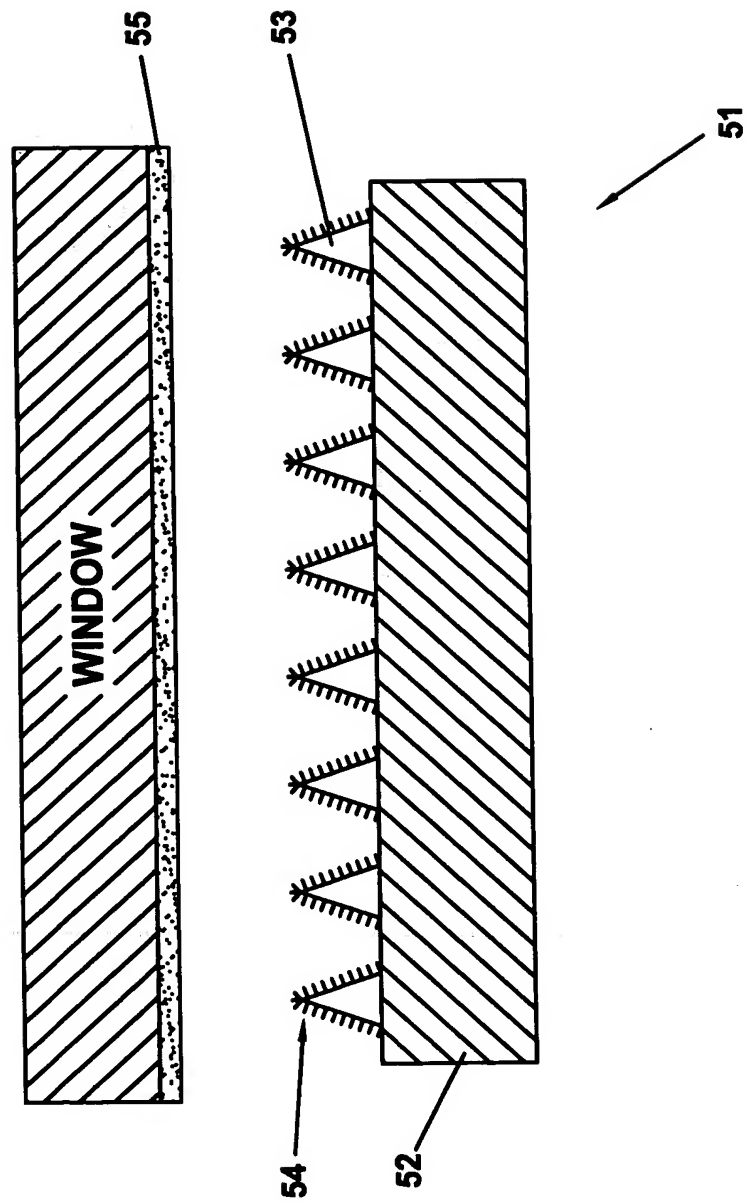


FIG. 21